

In the Claims

Claims 1-20 (Cancelled)

Claim 21 (New): An isolated conditionally immortal hematopoietic stem cell.

Claim 22 (New): The isolated cell of claim 21, wherein said cell is a human cell.

Claim 23 (New): The isolated cell of claim 21, wherein the conditional immortality is conferred to said cell by an oncogene.

Claim 24 (New): The isolated cell of claim 21, wherein the conditional immortality is conferred to said cell by a temperature sensitive oncogene that is not expressed at a temperature above 35 °C.

Claim 25 (New): The isolated cell of claim 24, wherein said oncogene encodes the SV40 T-antigen.

Claim 26 (New): A composition comprising isolated conditionally immortal hematopoietic stem cells.

Claim 27 (New): The composition of claim 26, wherein said cells are human cells.

Claim 28 (New): The composition of claim 26, wherein the conditional immortality is conferred to the cells by an oncogene.

Claim 29 (New): The composition of claim 26, wherein the conditional immortality is conferred to said cells by a temperature sensitive oncogene that is not expressed at a temperature above 35 °C.

Claim 30 (New): The composition of claim 29, wherein said oncogene encodes the SV40 T-antigen.

Claim 31 (New): A method for treating a cognitive deficit associated with brain damage, comprising intracerebrally administering an effective amount of hematopoietic stem cells to a patient in need of such treatment, wherein said intracerebral administering results in improved cognitive function.

Claim 32 (New): The method of claim 31, wherein the brain damage comprises loss of brain cells caused by physical trauma, hypoxia, or a chemical agent.

Claim 33 (New): The method of claim 31, wherein the brain damage comprises loss of brain cells caused by traumatic brain injury, stroke, perinatal ischemia, or multi-infarct dementia.

Claim 34 (New): The method of claim 31, wherein the brain damage comprises loss of brain cells associated with a neurodegenerative disease.

Claim 35 (New): The method of claim 34, wherein the neurodegenerative disease is Alzheimer's disease.

Claim 36 (New): The method of claim 34, wherein the neurodegenerative disease is Parkinson's disease.

Claim 37 (New): The method of claim 31, wherein the hematopoietic stem cells are conditionally immortal.

Claim 38 (New): The method of claim 31, wherein the conditional immortality is conferred to the hematopoietic stem cells by an oncogene.

Claim 39 (New): The method of claim 31, wherein the conditional immortality is conferred to the hematopoietic cells by a temperature sensitive oncogene that is not expressed at a temperature above 35 °C.

Claim 40 (New): The method of claim 39, wherein the oncogene encodes the SV40 T-antigen.

Claim 41 (New): The method of claim 31, wherein the hematopoietic stem cells are isolated.

Claim 42 (New): The method of claim 31, wherein the patient is human.

Claim 43 (New): The method of claim 42, wherein the hematopoietic stem cells are human cells.

Claim 44 (New): The method of claim 31, wherein said intracerebral administration is carried out by microsyringe infusion.

Claim 45 (New): The method of claim 1, further comprising monitoring the patient using a cognitive test after said intracerebral administration.